4. PROJECT SUMMARY

SNC Reference Number (enter if previously assigned)

County: Nevada

Applicant: Friends of Deer Creek

Project Title: Deer Creek Watershed Mercury Total Maximum Daily Load (TMDL) Plan

PROJECT GOAL

The goal of *The Deer Creek Watershed Mercury Total Maximum Daily Load (TMDL) Plan is* to develop an effective plan for a mercury TMDL for the Deer Creek Watershed by utilizing existing data, specifying the methods to collect additional data, and identifying research projects needed to quantify sources and processes that contribute to mercury contamination watershed wide in order to develop targets for remediation. Deer Creek, like many other watersheds in the Sierra Nevada, suffers from a pervasive, non-point source mercury contamination problem as a result of legacy mercury contamination from historic mining activities. Therefore, the need for a TMDL for mercury is not specific to Deer Creek but is needed in watersheds throughout the Sierra that share Deer Creek's legacy mercury contamination. An effective Mercury TMDL Plan for the Deer Creek Watershed will be a giant step towards the development of mercury TMDLs throughout California's Gold Country.

PROJECT SCOPE

The scope of the project will include research of existing information, development of a hydrograph analysis, sedimentation analysis, reconnaissance sampling, including the installation of continuous discharge gages, land ownership analysis, study development to fill critical data gaps, angler surveys to identify mercury remediation targets, and technical reviews of our progress by a scientific review panel. The development of the Mercury TMDL Plan will use existing data from scientific literature and from projects that Friends of Deer Creek is currently conducting or has completed, including the Sierra Nevada Conservancy grant-funded study *Mercury and Sediment Transport in Small Reservoirs: A Case Study for the Deer Creek Lower Watershed*, and the results from the State Water Resources Control Board-funded project *Deer Creek Watershed Mercury Survey*. Friends of Deer Creek owns a mercury analyzer, Teledyne Hydra-C, funded by a grant from the Goldman Foundation, which greatly enhances our ability to measure and monitor mercury, by allowing many more samples to be analyzed at much lower cost and in a more timely manner. Major project tasks include; review of existing data, field work to identify sediment and mercury sources, review of management methods to reduce sources, identify relevant numeric water quality targets, research methods to establish linkage between targets and sources, data gaps analysis, development of approaches for studies needed to fill data gaps, outreach and technical review of the plan. The desired outcome is nothing less than a new way forward for dealing with mercury in our watershed and the application of our methods to other Sierra watersheds that share our problem. Outreach will be conducted throughout the project in collaboration with our partners The Sierra Fund and The Tsi-Akim Maidu Tribe. Other sources of funding that will allow us to achieve our goal have already been received or committed, from the EPA Brownfields Program, the Sierra Nevada Conservancy, and the Regional Water Quality Control Board.

LETTERS OF SUPPORT

Included are letters of support from the Tsi-Akim Maidu, The Sierra Fund, and the Central Valley Regional Water Quality Control Board.

SNC PROJECT DELIVERABLES AND SCHEDULE

DETAILED PROJECT DELIVERABLES	TIMELINE
Task 1: Project Administration *Quarterly Reports* *Final Report* *Performance Measurement Accounting* *Monthly Staff meetings*	Feb 2009 – September 2012
Task 2: Review Existing Data on Mercury in Sediment and Bank Soils *Report on Literature Review Results*	Feb – May 2009
Task 3: Reconnaissance work to identify mercury and sediment sources *Reconnaissance field work and sampling including; sediment samples for mercury and continuous discharge measurements* *Mapping of potential hotspots, including mine sites, debris deposits, and load estimates*	May 2009 – May 2010
Task 4: Review of Potential Management Methods to Reduce Sources *Report- Management Methods; summary of existing mercury remediation methods and plans*	Nov 2009 – May 2010
Task 5: Identify Relevant Numeric Water Quality Targets *Convene Meetings with Central Valley Water Board and US Fish and Wildlife Service* *Review Existing Water Quality Standards and conduct angler surveys* *Report-Numeric Water Quality Targets*	Feb – Oct 2010
Task 6: Research Methods to Establish a Linkage between Targets and Sources *Report- Summary of Current Linkage Methods*	Aug 2010– Feb 2011
Task 7: Data Gaps Analysis *Report-Data Gaps Analysis; including hydrograph analysis, load estimates, and map of target sites for additional study*	Sept 2010 – Sept 2011
Task 8: Develop Additional Study Approaches *Report-Draft Mercury TMDL Plan for the DCW*	May 2011 – April 2012
Task 9: Outreach and Technical Review of Plan *Convene Technical Advisory Committee* *Revise TMDL Plan* *Report- Final Mercury TMDL Plan for the DCW*	Feb 2012 – July 2012

SNC PROJECT COSTS

PROJECT BUDGET CATEGORIES	TOTAL SNC FUNDING
Task 1: Administration	$33,000
Task 2: Data Review	$18,000
Task 3: Identification of Mercury and Sediment Sources and Quantities	$74,000
Task 4: Review of Potential Management Methods to Reduce Sources	$25,000
Task 5: Research and Angler Survey to Identify Relevant Numeric Water Quality Targets	$35,000
Task 6: Research Methods to Establish a Linkage between Targets and Sources	$25,000
Task 7: Data Gaps Analysis	$36,000
Task 8: Develop Study Approaches	$48,000
Task 9: Technical Review of Plan	$56,000
SNC GRANT TOTAL	**$350,000**